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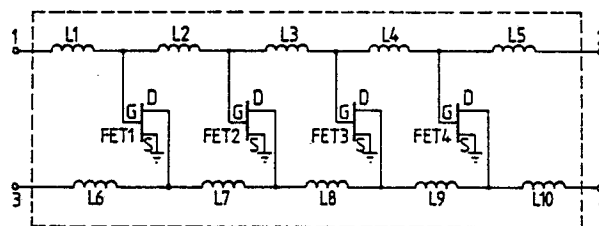
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(54) RF circuit arrangement.

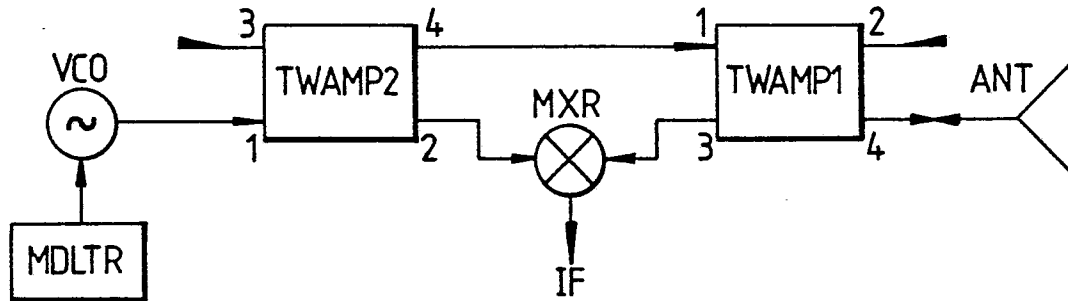
(57) An input signal for a travelling wave or distributed amplifier having input and output transmission lines is supplied to one end (1) of the input line and an output signal is derived from one end (4) of the output line. Conventionally, the other end (2, 3) of each line is terminated in a respective matched load, but three ports of the amplifier may be employed, signal-utilising means (MXR, Figure 3; MXR, Figure 4; D, Figure 5) coupled to one end (3;2;4 respectively) of either line utilising an attenuated signal derived from signal-supply means (ANT; VCO; LOSC respectively) coupled to the other end (4;1;3 respectively) of the same line. The specification describes the use of a travelling wave amplifier to replace a circulator (CIRC, Figure 2) in an FMCW radar having a single transmitting/receiving antenna (ANT) (TWAMP1, Figure 3), to replace a directional coupler (DC) for supplying a local oscillator signal to a mixer

(MXR) (TWAMP2, Figure 4), and in combination with a mixer diode (D) to form a mixer amplifier (TWAMP3, Figure 3), giving the possibility of the larger-scale integration of RF circuits.

Fig. 1.



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Fig. 4.



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
A	PATENT ABSTRACTS OF JAPAN, vol. 8, no. 206 (E-267)[1643], 20th September 1984; & JP-A-59 92 605 (TOSHIBA K.K.) 28-05-1984 ---	1	H 03 F 3/60 H 03 D 7/00 H 03 D 7/12
A	14TH CONFERENCE PROCEEDINGS EUROPEAN MICROWAVE CONFERENCE 84, Liège, 10th-13th September 1984, pages 483-487, Microwave Exhibitions and Publishers Ltd, Kent, GB; O.S.A. TANG et al.: "A microwave distributed MESFET mixer" * Figures 1,3,4; page 483, abstract * ---	1-4,9	
A	US-A-3 661 443 (W.C. HARRIS et al.) * Figure 2; column 2, line 33 - column 3, line 3 * -----	1-3	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			H 03 D H 03 F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 01-03-1988	Examiner TYBERGHIE G.M.P.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			